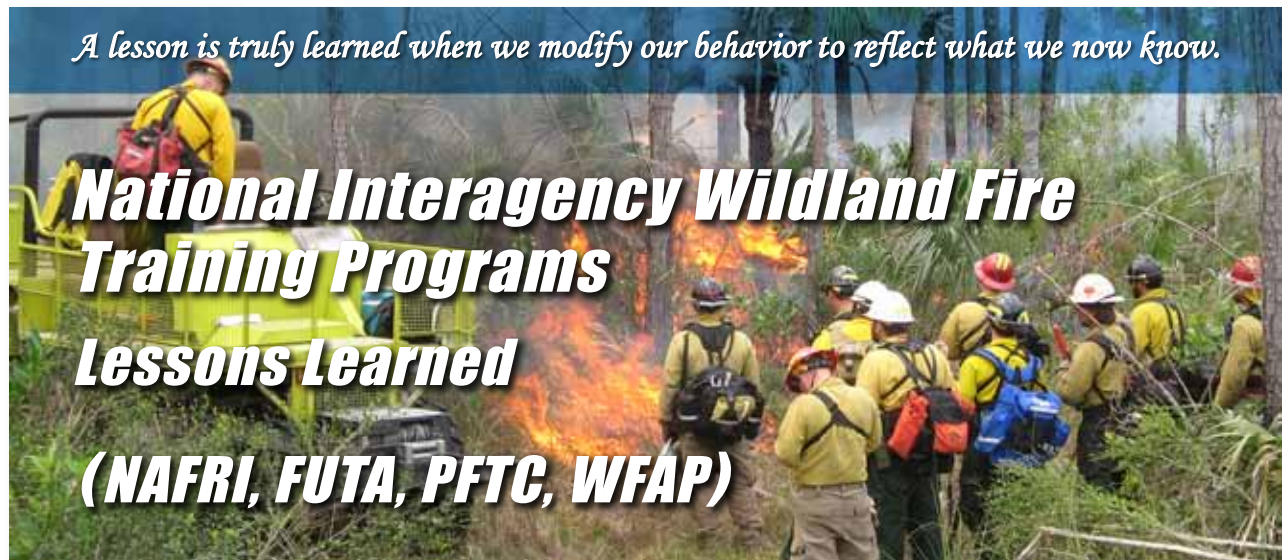




A lesson is truly learned when we modify our behavior to reflect what we now know.



In October 2009 the National Fire Training Centers came together under one umbrella with the intent of providing a streamlined, specialized training program from entry through advanced levels.

In This Issue

- Training Center Information 2
- Incorporating Lessons Learned... 3
- Notable Successes..... 4
- Difficult Challenges..... 5
- Vision of Training Centers 5

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Dear Reader:

This will be the final issue of *Scratchline*. The Wildland Fire Lessons Learned Center is launching a new quarterly publication, *Two More Chains*, dedicated to the wildland firefighter’s learning needs. If you are on the *Scratchline* electronic circulation/ mailing list, you will now be receiving *Two More Chains*, whose first issue is due out this April. After nine years and 28 issues of *Scratchline*, we would like to express our sincere appreciation to everyone who helped us develop these newsletters—covering everything from hotshot crew superintendent lessons learned, dozer and tractor plow operations, chainsaw safety and snag falling, to air operations on the fireline and so many other subjects that were relevant and timely for our wildland fire audience. All 28 issues of *Scratchline* are available at:

<http://wildfirelessons.net/Scratchline.aspx>.

Just as with *Scratchline*, we now look forward to providing the wildland fire community with a topnotch information/learning vehicle with *Two More Chains*.

Brenna MacDowell
 Scratchline Editor

Continued on page 2

www.wildfirelessons.net





*Classroom Simulation Exercise
Photo Courtesy of NAFRI Audio Visual*

Training Center Information

National Advanced Fire and Resource Institute

The National Advanced Fire and Resource Institute (NAFRI) is the advanced training center for the wildland fire community, teaching the 500 and 600 level courses as well as other advanced courses. In 2004, NAFRI (formerly known as the National Advanced Resource Technology Center) moved from Marana, Ariz. to its new facility by the airport in Tucson, Ariz. In addition to hosting courses, the facility is used by the Wildland Fire Lessons Learned Center (LLC), the Fire Use Training Academy (FUTA), for southwest geographic area training, and interagency meetings. During 2010, more than 13,000 people went through the facility for training and meetings. NAFRI employees, consisting of course coordinators, administrative professionals, logistics and audio visual staff, always ensured smooth operations.

www.nafri.gov

Fire Use Training Academy

The Fire Use Training Academy (FUTA) operated for 12 years out of the Southwest Interagency Training Center in Albuquerque, N.M. In 2009, the program moved to Tucson, Ariz. to be hosted at the National Advanced Fire and Resource Institute. The new intent for the program will be to identify and bridge existing gaps in training for people in the fuels and prescribed fire career paths. Training needs in fire management change constantly and FUTA has a proud tradition of adapting to meet those needs. FUTA has a very exciting future,

shifting the focus to incorporate more specific fuels management training and training for long-term fire management while continuing to provide planned or prescribed fire training. Each phase of the academy will take time to develop and roll out, so stay tuned.

<http://www.nafri.gov/futa/index.htm>

Wildland Fire Apprenticeship Program

The Wildland Fire Apprenticeship Program (WFAP) was born in the U.S. Forest Service's Pacific Southwest Region to meet agency needs and demands for consistent, standardized delivery of classroom instruction and on-the-job learning and development. Since 1990, students and staff representing the Forest Service as well as the Department of Interior agencies from across the nation continue to sponsor and use the program. The students are registered in a formal apprenticeship program with the Department of Labor (similar to plumbing and carpentry apprentices).

The end result of apprenticeship is to develop fully qualified journey workers at the Firefighter Type 1 level. The WFAP achieves this goal by requiring participants to achieve a minimum of 3,000 hours of training and learning, with the majority (2,800 hours) consisting of "on the job learning" (OJL) in the "Wildland Fire Preparedness, Suppression, and Fuels Management" work process category. During their apprenticeship, participants attend two residential academies lasting four weeks each, where they attend a number of suppression, ICS, and leadership courses.

WFAP academies historically begin in January and extend into May. However, to meet the increasing demand from the field, 2010 saw the first fall academy occur. In 2010, there were four advanced academies and three basic academies serving a total of 593 students. The academy relies on over 200 individuals as cadre for curriculum delivery and program support. At any time, there are approximately 1,200 apprentices at different stages of the program.

Some people compare this academy to a remarkable machine, requiring tremendous effort by many individuals, including previous staff members who helped establish the academy. In addition, people who comprise the academy cadre temporarily leave full-time jobs to contribute to the effort. <http://www.wfap.net/>



Burning Along Boardwalk
Photo Courtesy of PFTC

Prescribed Fire Training Center

In 1998, the Prescribed Fire Training Center (PFTC) was established as a Center of Excellence for Prescribed Fire, with an emphasis on actual field experience to increase skills and knowledge and build confidence in the application of prescribed fire. PFTC is unique, blending prescribed burning experience with classroom instruction. Since its creation, the academy has held at least three 21-30 day sessions each year, hosting from one to seven prescribed fire modules per session. Each module contained between five and eight practitioners. In addition, PFTC holds annual Agency Administrator and Resource Specialist Workshops on prescribed fire. To date, 1,425 participants have attended either a session or a workshop at PFTC. During this time, there have been 3,731 training assignments and 1,965 prescribed burns, resulting in 739,573 acres treated, of which 200,785 were WUI acres. <http://www.fws.gov/fire/pftc/>

Incorporating Lessons Learned

Utilizing Technological Resources

There are three ways NAFRI incorporates lessons learned: First, by actually working lessons learned and best practices into the curriculum and content of NAFRI courses. Second, LLC staff members participate in courses to familiarize students with the services of LLC. Third, NAFRI continually utilizes LLC technology such as My Fire Community, creating neighborhoods or “communities of practice” to help students communicate both before and during courses.

Meeting Individual Needs through Curriculum Adaptation

FUTA has a strong tradition of soliciting feedback from students and managers and adapting to address the lessons learned. Lessons learned are incorporated at every level of the program. Some examples include adjusting classroom and field time to meet individual needs, developing workshops on topics with no existing curriculum, and constantly adjusting cadres to provide the latest information from current practitioners. FUTA has operated as a learning organization from its earliest days based on the simple concept of listening to the needs of the field and management and then providing solutions.

With FUTA being co-located with the LLC at NAFRI, great opportunities exist to collaborate with the LLC to ensure that FUTA stays on the cutting edge, incorporating the LLC’s key learning insights into the FUTA program. In the past, FUTA has focused on lessons learned to help steer the program into the future. By maintaining an “Eyes Forward” approach, FUTA will continue to adapt based on lessons of the past to enhance the program into the future.

Staff Rides, Videos and Other Supplemental Materials

The WFAP cadres are strongly encouraged to expand upon the standard NWCG training materials by adding actual life experiences that add relevance and motivate the students. Offering a staff ride to the Rattlesnake Fire on the Mendocino National Forest has proven effective, along with incorporating videos and other supplemental materials provided by the LLC. The academy even incorporates lessons learned into the program with the naming of its classrooms. For example, in the classroom named for Southern California’s 1966 Loop Fire, instructors open their session with a synopsis of that event and the lessons and mitigations resulting from it. The fatalities on the Loop Fire prompted the creation of the downhill line construction checklist. Instructors have found it useful to continue tying the classroom’s namesake fire throughout the class.

Field Activity and After Action Reviews (AARs)

Because the PFTC is based on actual field experience, the great majority of learning takes place through field activity and the resultant AARs. Additionally, the host units and cadre/mentors/coordinators that the center works with are encouraged to relate lessons learned throughout all of PFTC’s training activities.

Notable Successes

Expertise in Course Instruction

One reason NAFRI remains successful is its use of experts from across the nation in course instruction. Course faculty members are experts. Because NAFRI is a national training center, it has the ability to draw instructors, both practitioners and experts from academia, from across the nation. Because courses from NAFRI are updated on an annual basis, the most relevant information is taught to meet the needs of participating students.

Another success lies in the fact that NAFRI works closely with the international community. International students also participate in NAFRI programs.

Succession Planning and Training

To date, 758 students have graduated from FUTA. The academy has delivered 4,501 hours of coursework and directly contributed to the treatment of 514,277 acres of fuels. A 2008 survey revealed that 98 percent of FUTA graduates credited FUTA with advancing their qualifications. Additionally, the survey indicated that 95 percent of the graduates felt FUTA directly aided in advancing their careers. FUTA was ahead of its time in addressing the issue of succession planning and will no doubt continue this tradition in its new form.

Adaptability has always been a large part of FUTA's success. FUTA will continue to adapt into the future to ensure that the needs of the interagency fuels and wildland fire management communities are met.



*Ignition in Heavy Southern Rough
Photo Courtesy of PFTC*

Continuing Education/ Volunteer Program Educates About Burns

Through the determination and effort from several Wildland Fire Apprenticeship Program students, WFAP is part of a continuing education/volunteer program with the University of California at Davis Regional Burn Center and the Children's Burn Unit of Shriners Hospital. The relationship with this volunteer program provides apprentices with opportunities to educate themselves about the recognition and treatment of burn injuries in the field, as well as help them develop skills in public speaking and interpretation. This was a grass roots effort started by apprentices from the Los Padres National Forest. The intention is to make this part of academy culture.

Implementing a Burn Plan

The PFTC developed its 21-day sessions to allow participants the opportunity to understand the objectives behind the implementation of a burn plan. Many of the modules have the chance to visit sites that they burned, or that another module burned during a previous session, and assess the effects of the burn and how well it met the plan's objectives. This practice has strengthened the core principle that burning must accomplish more than creating black acres. In addition, the PFTC is creating skilled and knowledgeable prescribed fire practitioners by taking the time to review the effects, the accomplishments, and the relevance of previous management activities—and consider potential changes to better meet objectives.

The formats of the PFTC workshops represent another notable success. Though the PFTC starts with principles and core elements for the workshops, it tailors much of the specific subject matter to meet the needs of current attendees. This requires an open exchange of information between the participants and the cadre as well as flexibility by all involved. Consequently, PFTC workshops have been highly successful in meeting the expectations of their participants.



*Classroom Simulation Exercise
Photo Courtesy of NAFRI Audio Visual*

Difficult Challenges

Availability of Subject Matter Experts

The availability of Subject Matter Experts to teach NAFRI courses can be challenging because as experts they have heavy workloads from their own organizations and other interagency efforts. NAFRI operates under a different training model than NWCG curriculum by updating courses annually. It therefore requires a larger time commitment from the faculty and steering groups that manage the courses. The “best of the best” teach NAFRI courses. Because these people are at the top of their fields, they are busy. A further challenge is the fact that the pool of experts is shrinking due to retirements and funding. Student numbers for advanced courses are also dwindling due to the “pipeline” not having as many individuals and funding becoming less available.

Vision of Training Centers

Incorporating Technology

The Director of the National Fire Training Centers would like to see a continuance of providing advanced training at NAFRI while ensuring that lower-level training feeds into progressively higher training. This will help meet the needs of the community and incorporate technology to a larger extent. For example, NAFRI is working on plans to eventually begin holding simultaneous training in separate locations using technology such as video conferencing and webinars with instructors or coaches. This way, courses can be held in Tucson, but broadcast simultaneously to locations in Florida or Hawaii. This will allow NAFRI to reach a larger audience at a lower cost.

One area NAFRI needs to move forward in is the follow-up with students after they have gone through a course to keep them updated on information related to the courses they have taken. This will help solidify training.

Classroom Instruction and Related Field Experience

The vision for FUTA and its role in wildland fire training is to bridge the existing gaps in fuels management training and continue to develop other opportunities to assist the wildland fire and fuels communities. FUTA will maintain its flexibility and respond to the needs and demands of the land management agencies and our cooperators. FUTA will adapt into a key element of a larger training/educational path specific to fuels management and the use of wildland fire. The new program will address all the varied skill sets needed to succeed in this specific arena of fire management. The program will continue to operate using the method of “theory – application” (classroom instruction immediately followed by related field experience). This method has always provided the cornerstone of FUTA’s success. This balanced approach acknowledges the frustrations inherent to practice without instruction or instruction without application. FUTA will continue to hold this value as it transitions into a new format.

This situation presents the opportunity to include more specialists from state and local fire organizations into NAFRI training cadres. The use of technologies is also being developed to help meet this gap.

Restructuring FUTA

Restructuring always proves difficult. That is probably the biggest concern facing the Fire Use Training Academy. Regaining the momentum lost during the two-year time period that FUTA program staff was being hired is going to be a challenge. However, in keeping with FUTA tradition, this challenge will be faced with enthusiasm and vigor to regain that momentum.

Increased Student Numbers, Decreased Staff

One challenge facing the Wildland Fire Apprenticeship Program—as well as other programs—is how the demand for its services has increased steadily, while the number of its permanent staff has declined. This is one reason for holding academies outside of the “historic” timeframe of January through May. WFAP is also working to solve how its curriculum is spread out and administered. The program has discovered through student and staff feedback that the current model of conducting eight weeks of side-by-side classes (four basic and four advanced) can be improved greatly by integrating the program curriculum.

Safety is Priority

As with all training involved with active fire, safety is the highest priority. Any time PFTC sends modules out to burn with hosts, the staff is cognizant of the safety of both the modules and the public. Additionally, all attendees have many duties and responsibilities that demand much of their time. It is therefore difficult to find the time for these extended trainings. Thus, it is imperative to utilize the attendee’s time to the utmost and deliver the best training experience possible. However, this results in a hectic schedule with multiple moving parts prior to, during, and following the sessions and workshops.

Demanding Quality

WFAP is working to positively impact the culture of federal land and emergency management by striving to be dynamic and relevant to the apprentices and the end user—the sponsoring agencies. The program promotes innovation by demanding the highest quality instructors, course delivery and content, as well as by encouraging people to think outside the box. Apprentices are strongly encouraged to adopt a “student of fire mentality,” where the importance of discipline is emphasized beginning the moment apprentices are hired and continuing throughout their careers. By applying these and other principles, the National Wildland Firefighter Apprenticeship Program is one tool which current land and emergency managers can rely upon to help in the execution of agency goals and objectives.



Sandtable Exercise

Photo Courtesy of WFAP

Interaction with Fire Managers and Mentors

The PFTC will be hosting 21-day on-the-ground training sessions seven to eight months per year. These sessions will enhance the students’ skills for the position they are working on by exposing them to many different types of programs, with numerous objectives from urban interface to restoration. The small group interaction with fire managers promotes students’ willingness to interact with fire managers and mentors.

In addition, PFTC’s academy coordinator informs that the academy will provide the Prescribed Fire Workshop for Resource Specialists and the Prescribed Fire Workshop for Agency Administrators more frequently—to keep up with the demands of new line officers and increasing fuels management programs. These sessions will provide valuable experiences for the students and focus strictly on the prescribed fire management function.

The individual programs within the National Fire Training Centers are working together to provide a cohesive training program in conjunction with local and geographic area training for the wildland fire community.

